

REMARKS

Summary of the Office Action

In the Office Action, claims 15 and 18 have been objected to for a minor informality.

Claims 1-18 and 24 stand rejected under 35 U.S.C. 112, 1st Paragraph.

Claims 1-22 and 24 stand rejected under 35 U.S.C. 112, 2nd Paragraph.

Claim 19 stands rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S.

Patent Nos. 3,770,292 to *Palazzetti* in view of 6,293,530 to *Delorenzis*.

Summary of the Response to the Office Action

Applicant proposes amending claims 1, 4, 15, 18 and 19, and canceling claims 2, 5 and 24. Based on the arguments presented below, claims 1, 3, 4 and 6-22 are pending for further consideration.

Claim Objections

In the Office Action, claims 15 and 18 have been objected to for a minor informality.

Applicant proposes amending claims 15 and 18 to now recite Finite Element Analysis software.

Applicant therefore respectfully requests withdrawal of the objection to claims 15 and 18.

35 U.S.C. 112, 1st and 2nd Paragraph Rejections

In the Office Action, claims 1-18 and 24 stand rejected under 35 U.S.C. 112, 1st Paragraph, and claims 1-22 and 24 stand rejected under 35 U.S.C. 112, 2nd Paragraph.

In the interest of expediting prosecution of this application, Applicant proposes amending claims 1 and 4 as noted above, and canceling claims 2, 5 and 24.

Applicant therefore respectfully requests withdrawal of the 35 U.S.C. 112, 1st and 2nd Paragraph rejections.

All Claims are Allowable

In the Office Action, claim 19 stands rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent Nos. 3,770,292 to *Palazzetti* in view of 6,293,530 to *Delorenzis*.

Applicant respectfully traverses this rejection for the following reasons.

With regard to independent claim 19, Applicant respectfully asserts that *Palazzetti* and *Delorenzis*, whether viewed singly or in combination, do not teach or suggest, or can be combined to disclose an apparatus for simulating a coil spring on a suspension system in terms of derived torque and force characteristics of the spring, the apparatus including, “a six degree of freedom force field generator for simulating the spring, said force field generator secured in the suspension system, and means for activating the force field generator to produce forces therein for characterizing six degree of freedom spring reaction forces,” as recited in independent claim 19, as amended.

Support for these features recited in claim 19 can be found at least in paragraphs 10-12 and 22-37 of the Published Application, and in Figs. 2-4b of the originally filed drawings. Specifically, as shown in Figs. 2-4b, the present invention provides an apparatus for simulating a coil spring on a suspension system 40 in terms of derived torque and force characteristics of the spring. The apparatus includes a six degree of freedom force field generator 42 for simulating the spring. The force field generator is secured in the suspension system. The apparatus further includes means for activating the force field generator to produce forces therein for characterizing six degree of freedom spring reaction forces.

The Official Action cites *Palazzetti* and *Delorenzis* as teaching or suggesting the apparatus as recited in independent claim 19.

Palazzetti, as illustrated in Figs. 1 and 2 thereof, discloses a system for simulating or mimicking a suspension spring force characteristics. Further, *Delorenzis*, as noted in the Official Action appears to disclose a system for spring force characterization.

Contrary to the present invention as recited in independent claim 19, the systems of *Palazzetti* and *Delorenzis* however differ from that of the present invention in several key and patentably distinct respects. For example, the systems of *Palazzetti* and *Delorenzis* are axial in nature, in that they do not have the ability to generate/simulate a true coil spring's lateral forces and torques applied to the spring seats. More importantly, the systems of *Palazzetti* and

Delorenzis are of an entire suspension system, whereas the present invention as recited in claim 19 is directed to a coil spring and the ability to simulate and model the spring itself to better understand a required spring design requirement/specification for already common suspensions. Moreover, whereas the present invention, as indicated above, is directed to a coil spring and deriving spring design specification requirements, the inventions of *Palazzetti* and *Delorenzis* actually substitute a liquid/hydropneumatic spring mechanism for a coil spring in an active suspension and gain no benefit toward a coil spring application in a traditional suspension (non-active).

Thus contrary to the recitation in independent claim 19 of "a six degree of freedom force field generator for simulating the spring ... characterizing six degree of freedom spring reaction forces," the mechanisms of *Palazzetti* and *Delorenzis* are only single line of action mechanisms and do not have the six degree of freedom reactions that a coil spring has. Therefore, the mechanisms of *Palazzetti* and *Delorenzis* cannot be used for deriving a spring design specification or help with the investigation of various suspension characteristics based on the use of liquid or hydropneumatic springs as taught therein.

As pointed out in M.P.E.P. § 2143.03, "[t]o establish prima facie obviousness of a claimed invention, all the claimed limitations must be taught or suggested by the prior art". *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974). Since this criterion has not been met, Applicant respectfully asserts that the rejection under 35 U.S.C. § 103 should be withdrawn because *Palazzetti* and *Delorenzis* do not teach or suggest each feature of independent claim 19, as amended.

In view of the above arguments, Applicant respectfully requests the rejection of independent claim 19 under 35 U.S.C. § 103 be withdrawn. Additionally, claims 20-22, which depend from independent claim 19, are allowable at least because their base claim is allowable, as well as for the additional features recited therein.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding

after consideration of the response, the Examiner is invited to contact the Applicant's undersigned representative to expedite prosecution.

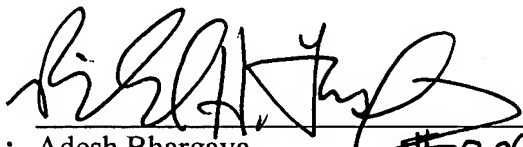
If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 04-2223. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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